Thinking Styles of Malay Undergraduates in a Malaysian Public University: A Case Study

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Introduction

On embracing the challenges of a globalised world, individuals must possess a balanced thinking competency. They must have the inclination to use the right-brain to creatively produce new ideas and at the same time utilize the left-brain to increase their analytical and critical thinking skills.

In professional settings, creative, analytical and critical thinking skills are among the skills most required by employers, particularly in private sectors. Creative thinking is important in a globalised market because it promotes a progressive, dynamic and proactive stance which ensures competitiveness in an open market. Analytical thinking enables facts and information to be processed in a detailed and systematic manner. Critical thinking, on the other hand, ensures that flaws and weaknesses can be identified.

Various studies have shown that Malay graduates tend to perform poorly in their studies (Morshidi Sirat et al., 2003). It has also been shown that the majority of unemployed graduates in Malaysia are Malays. It is imperative therefore to conduct studies which analyse and explore the thinking or mindset of the Malays in higher education as such findings may reveal vital clues as to the possible causes of their weaknesses.

The aim of this paper is to report on a preliminary case study on the thinking styles of Malay undergraduates. The study seeks to establish what thinking styles are most and least preferred by the respondents.

Methodology

In this case study, a sampling of 30 students from Universiti Sains Malaysia was chosen. They comprise second and final year students from both Arts and Science courses. Performa Profiling, introduced by Ned Herrmann, was the instrument employed in this study. Performa Profiling is a tool to identify the thinking styles preferred by particular individuals based on four quadrants. Each quadrant reflects different thinking preferences as shown in Table 1.

Table 1: Ned Herrmann's performa profiling

Quadrant A Top Left Analytical Logical Critical Rational Fact based	**Quadrant D** Top Right Holistic Creative Integrative Intuitive Synthesising
Quadrant B Bottom Left Detailed Conservative Control Planned Systematic	**Quadrant C** Bottom Right Emotional Spiritual Share Interpersonal Symbolic

This instrument reflects how an individual manages his/her thinking; whether there is a preference to use the left hemisphere or right hemisphere of the brain. To establish their preferences, the respondents were requested to allocate points to each of the thinking styles listed in table 1. The points range from 25 to indicate high preference to 5 to indicate low preference.

Findings

In general, the Malay undergraduates in this study did not display a balanced dominance between the left and the right side of the brain. They preferred using the left compared to the right side of the brain. A majority of them allocated high points for the thinking styles controlled by the left brain, particularly those in Quadrant A. 15 respondents allocated maximum points for analytical thinking styles, 13 for logical thinking and 17 for rational thinking. Only

one respondent granted maximum point for critical thinking while two respondents assigned maximum points for fact-based thinking. This indicates that in general, the respondents were less inclined to prefer factual and critical thinking styles (see Table 2).

The second preferred thinking styles are those dominated by the lower left hemisphere of the brain. Of the various thinking styles involved, most respondents preferred detailed thinking which concentrates on finer points. 12 respondents assigned it the highest points. Other thinking styles in this category received average points. Systematic thinking was given maximum points by six respondents, planned thinking was most preferred by five respondents, and conservative thinking, three respondents.

Thinking styles dominated by the right hemisphere of the brain were less preferred by respondents. The findings indicate that the respondents were however more inclined to choose Quadrant D, which represents the top right hemisphere of the brain over thinking styles in Quadrant C. Creative thinking is most preferred with 11 respondents giving it maximum points. Intuitive thinking received maximum points from only nine respondents. All the other thinking styles, particularly integrated thinking, are assigned the minimum point of 5. This indicates that while the respondents display some interest in creative and intuitive thinking, they were less interested in thinking styles which require them to view something globally, to perform multi-tasking and to combine ideas.

Insofar as Quadrant C is concerned, the respondents were relatively keen on emotional and spiritual thinking styles. Only seven respondents assigned them maximum points. Meanwhile, interpersonal thinking style was only given maximum points by six respondents while sharing and symbolic thinking styles are given maximum points by two respondents each. This implies that, the respondents generally had average preferences towards humanistic aspects of thinking as indicated by emotive and spiritual thinking styles. They also displayed a lower inclination towards sharing and symbolic thinking.

Table 2: Points allocated by respondents for various thinking styles

Quadrant A	25	20	15	10	5	Total Respondents	**Quadrant D**	25	20	15	10	5	Total Respondents
Analytical	15	5	6	2	2	30	Holistic	5	6	6	6	7	30
Logical	13	7	7	2	1	30	Creative	11	7	5	5	2	30
Critical	1	6	7	5	11	30	Integrative	0	2	5	5	18	30
Rational	17	6	4	2	1	30	Intuitive	9	3	4	7	7	30
Fact based	2	7	3	9	9	30	Synthesising	1	6	11	10	2	30
Quadrant B	25	20	15	10	5	Total Respondents	**Quadrant C**	25	20	15	10	5	Total Respondents
Detailed	12	5	7	4	2	30	Emotional	7	5	3	8	7	30
Conservative	3	8	7	8	4	30	Spiritual	7	6	8	6	3	30
Control	1	4	9	8	8	30	Share	2	6	8	9	5	30
Planned	5	8	6	3	8	30	Interpersonal	6	4	3	9	8	30
Systematic	6	7	5	7	5	30	Symbolic	2	2	4	14	8	30

Conclusion and Implication

This study is by no means conclusive due to the small sample size. However, it offers a general picture of how Malay undergraduates may think.

The study shows that the Malay undergraduates preferred to utilise the left hemisphere of the brain when thinking while the right brain was given less prominence. The influence of the education system at school could be a contributing factor. Scholars such as Abdullah Hasan and Ainon Mohamad (2000) and John Arul Phillip (1997) argue that the use of the right side of the brain is not emphasized in the education system. As a result, students may be efficient at gathering information and answering questions based on 'what', but face difficulties in solving application problems and questions based on 'how'.

Interestingly, although there is a distinct preference for analysis and logic, the respondents were less inclined to engage in critical thinking. Critical thinking requires detailed evaluation of the weaknesses or validity of certain ideas. It requires a provocative and inquisitive mind to challenge rather than blindly accepting an idea. These characteristics are significantly absent in the Performa profiling of the respondents. The findings are consistent with the view offered by The Royal Professor Ungku Aziz who asserts that the direct consequence of the Malay people's reluctance and fear of being critical makes them fearful of challenges. This is partly due to the conservative nature of the Malay tradition, which values hierarchical respect and humility. As a direct consequence, they appear as passive and less competitive in the job market.

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Apart from critical thinking, creativity is needed to ensure that Malays remain competitive. Although the respondents indicated interest in creativity, as the findings reveal, their preference for creative thinking was, at best, average. The problem is compounded by the fact that synthesis, holistic and integrative thinking are styles that the respondents least preferred. These thinking styles are essential in generating creative ideas. Consequently, the respondents may find generating creative ideas difficult, thus giving the impression that they lack general knowledge and have narrow perceptions. In working environment, the lack of these thinking styles may hamper their ability to accept new ideas or out-of- the-box solutions.

The study also reflects the respondents' interaction patterns, which show a lack of preference for inter-personal thinking styles and sharing. This tendency may limit their success in teamwork situations, either at university or in work place. People who have difficulties interacting with others will face similar problems in adapting to new places or situation. This is supported by Dr. Abdul Samad (in Wahid Hashim: 2001) who claims that Malay students have a tendency to socialise only within their group, among Malays and among those who originate from the same state. 'Networking' and 'teamwork' are skills highly demanded by employers. The lack of such skills would close many doors and limit their opportunities for promotion.

In general, it can be said that Malay undergraduates are passive and have the inclination to view things as black and white, lack the ability to compete and have limited flexibility in their perceptions of others. In the age where the job markets are extremely limited, they need a significant paradigm shift in order to respond accordingly. Most significantly, Malay undergraduates need to reassess the changes that are currently dictated by the workplace and respond proactively.

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